

of that gas and a compound. Dependent claims 14-15 incorporate these limitations and express still other limitations concerning the chemically inert charged species producer gas. Independent claim 22 requires supplying a chemically inert-excitation gas and further requires interacting that gas with another gas. Dependent claim 23 incorporates this limitation and further expressly limits the act of interacting the gases. Independent claim 24 includes an act involving a chemically inert energy-transfer gas. Dependent claims 25-26 incorporate this limitation and express still other limitations concerning interacting that gas with another. Independent claim 28 requires interacting a material with a chemically inert collider gas. + 1/2, e.g.

As support for anticipation, the Examiner relies on Chang's reference to argon in a plasma process that deposits titanium. For instance, the Examiner cites Chang's reference to an argon gas source (Office Action dated 9/11/02 at p. 2-4 (citing Chang's component 100d).) The Examiner also cites Chang's reference that its plasma forming gas may or may not include a flow of an inert carrier gas, such as argon. (*Id.* at p. 2 (citing Chang at col. 11, ln. 31-32); *see also* Chang at col. 11, ln. 33).) Assuming *arguendo* that such an excerpt discloses some sort of relation between Chang's argon and Chang's plasma, neither these excerpts, nor any other part of Chang, express argon's specific role as a charged species producer (as required by claims 13-15), an excitation gas (as required by claims 22-23), an energy-transfer gas (as required by claims 24-26), or a collider gas (as required by claim 28). Accordingly, such excerpts from Chang necessarily fail to disclose interaction with such gases, as required in the limitations addressed above. Rather, a careful reading of Chang as a whole discloses that Chang's argon serves to act as a carrier (col. 3, ln. 43; col. 11, ln. 33) or a pressure stabilizer (col. 10, ln. 3-11). (*See also* col. 1, ln. 41 (disclosing argon's function as a diluent).)

Further, a third excerpt cited by the Examiner discloses only the opposite of the limitations described above. Specifically, the Chang paragraph that addresses igniting a plasma (a portion of which was cited by the Examiner) discloses that it is the *RF energy* that forms the plasma. (Chang at col. 1, ln. 64-67 (cited in the Office Action dated 9/11/02 at p. 3); *see generally* Chang at col. 1, ln. 57 – col. 2, ln. 8.) Significantly, although Chang refers generally to "a" process gas in this paragraph, the role of Chang's argon carrier gas in the manner required by the rejected claims is not specified. Moreover, it is unclear whether Chang even considers argon to be a process gas. At one

point, Chang appears to distinguish argon from processes gases, which are reactive. (Chang at col. 10, ln. 3-11.)

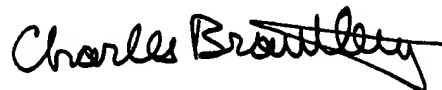
As a result, Chang fails to disclose that its argon functions as required by claims 13-15, 22-26, and 28. Hence, Chang also necessarily fails to disclose the required interactions from those claims as well as other limitations associated with such functions.

The Examiner rejected claims 16-18 under §102 as being anticipated by the matters inherent in Chang, as purportedly demonstrated by the Muller article. However, claims 16-18 are dependent upon claims 13-15; and the rejection of claims 16-18 is premised on the notion that Chang expressly discloses (1) a chemically inert charged species producer gas, and (2) interacting that gas with a compound. (Office Action dated 9/11/02 at p. 4.) As argued above in favor of claims 13-15, Chang fails to disclose that its argon functions as a charged species producer. Therefore, Chang necessarily fails to disclose any interaction with such a charged species producer. As a result, the novelty rejections fail against claims 16-18 as well.

Conclusion

In light of the above remarks, Applicants submit that claims 13-18, 22-26, and 28 are allowable over the applied references. Therefore, Applicants respectfully request reconsideration of the Examiner's rejections and further requests allowance of all of the pending claims. If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact Applicants' undersigned attorney at the number indicated.

Respectfully submitted,



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